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EXAMINER

CHARLES, MARCUS

ART UNIT

PAPER NUMBER

3656

NOTIFICATION DATE

DELIVERY MODE

07/22/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

info@lmiplaw.com

DETAILED ACTION

This action is responsive to the amendment filed 3-25-2009, which has been entered.

Claims 1-11 are currently pending.

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The drawings are objected to because in fig. 1, the section "Z" should be --IIb-- or --2b--. It should be noted that the plane upon which a sectional view is taken should be indicated on the view from which the section is cut by a broken line. The ends of the broken line should be designated by Arabic or Roman numerals corresponding to the view number of the sectional view, and should have arrows to indicate the direction of sight.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering

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of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities: in the paragraph relating to Brief Description of the Drawing, line 9, the detailed view "Z" should be --IIb-- or --2b--. See objection to the drawing.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tilch et al. in view JP (2003-25803). Tilch et al. discloses an outer ring (4) having a hollow cylindrical section (10) and having a flange (9) which leads radially outwards from the hollow cylindrical section (2c), the flange merging at a concave channel (8) into the cylindrical section, wherein the channel (8) as view in a longitudinal direction (see drawing illustration below) through the outer ring (4) along the rotational axis of the outer ring, merges into a face (see 9) of the flange at a first transition and into a

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circumferential surface (10) on the section at a second transition, and the perpendicular spacing between an imaginary axial extension of the circumferential surface (10) and the first transition being smaller than a spacing which is parallel to the rotational axis between the imaginary radial extension of the face and the second transition. However, Tilch et al. fail to disclose the outer ring having an annular ring in the radially outer surface thereof. JP (2003-25803) discloses a wheel bearing comprising an outer ring (2, see figs. 7-8) having an annular groove on the radial outer surface of the outer ring. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the outer ring of Tilch et al. so that it has an annular groove of the radial outer surface in view of JP (2003-25803) in order to relieve the stress and strain on the outer ring.

In claims 3-4, the channel of inherently includes the first and second radii as claimed.

In claim 5, note it is apparent that the first radii is small that the second radii.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tilch et al. Tilch et al. fail to disclose the ratio between the perpendicular spacing and the parallel spacing is at least 1:1.5 and the ratio between the first and second radius is

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1:2.5. It should be noted that the channel of the claimed invention is similar to that of Tilch et al. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the channel of Tilch et al. to include the claimed ratio, since it has been held that where the general conditions of a claim is disclosed in the prior art, discovering the optimum ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

8. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tilch et al. Tilch et al. is silent as to how the flange and the outer ring are formed. However, the method of forming the device is not germane to the issue of patentability of the device itself. Therefore, this limitation has not been given patentable weight.

9. Claims 1 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dougherty (5,494,358) in view of Tilch et al and JP (2003-25803). Dougherty discloses an outer ring (12) having a hollow cylindrical section and having a flange (20) which leads radially outwards from the hollow cylindrical section, the flange merging at a concave channel (not labeled) into the cylindrical section, wherein the channel. Dougherty also disclose as view in a longitudinal direction, the outer ring (12) along the rotational axis of the outer ring, merges into a face of the flange at a first transition and into a circumferential surface on the section at a second transition but fails to disclose a perpendicular spacing between an imaginary axial extension of the circumferential surface and the first transition being smaller than a spacing which is parallel to the rotational axis between the imaginary radial extension of the face and the second transition. Tilch et al. clearly disclose the claimed invention as in paragraph 5 above.

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Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the channel of Dougherty to include the features of the Tilch et al. in order to reduce contractional stress in the channel. In addition, Dougherty and Tilch et al. alone or combine fails to disclose the outer ring having an annular ring in the radially outer surface thereof. JP (2003-25803) discloses a wheel bearing comprising an outer ring (2, see figs. 7-8) having an annular groove on the radial outer surface of the outer ring. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the outer ring of Dougherty so that it has an annular groove of the radial outer surface in view of JP (2003-25803) in order to relieve the stress and strain on the outer ring.

Regarding claim 7, Dougherty discloses the claimed invention including the outer ring (12) being supported in a wheel carrier (B) such that the carrier and the wheel carrier bears axially against flange and radially against the circumferential surface in such a way that the wheel carrier and the channel are spaced from one another at least as far as the transitions (see attached drawing)

In claims 9-11, Dougherty discloses the fastening element (22) engaging behind the flange on one side thereof, and passing through the recess of the flange to fasten the carrier.

In claim 11, note the recess is opened radially to the outside.

Response to Arguments

10. Applicant's arguments with respect to claims 1-11 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marcus Charles whose telephone number is (571) 272-7101. The examiner can normally be reached on Monday-Thursday 7:30 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ridley Richard can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Marcus Charles
/Marcus Charles/
Primary Examiner, Art Unit 3656

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